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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,068	06/15/2000	David S. Tait	7125	9142

28574 7590 05/15/2003

ZENITH ELECTRONICS CORPORATION  
2000 MILLBROOK DRIVE  
LINCOLNSHIRE, IL 60069

EXAMINER

TRINH, SONNY

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/595,068

Applicant(s)

TAIT, DAVID S.

Examiner

Sonny TRINH

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 38-57 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. **Claims 38, 48** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330) in view of Yu ("Terk"; U.S. Patent Number 5,300,935).

Regarding claim 38, with reference to figure 1 and its description, Terk discloses a system for automatically positioning an antenna comprising:

a motor arranged to be coupled to the antenna (fig. 1, motor 16, antenna 10);  
and,

a controller (fig.1, controller 22) coupled to the motor (16), wherein the controller is arranged to control the motor in response to selection of a channel so as to automatically drive the antenna to a position at which the antenna is aimed at a source of a signal associated with the selected channel (column 2), wherein the controller

Art Unit: 2685

operates the motor to drive the antenna to the position based upon a location of the signal source and a location of the antenna (claims 1-2, 8,14,16). However, Terk does not explicitly disclose that the controller is arranged to receive the signal from the positioned antenna and to process the received signal so as to improve reception of the received signal, and wherein the processing of the received signal is dependent upon the position.

In an analogous art, Yu teaches an antenna controlling apparatus for automatically fine tuning the broadcast signal received via an antenna. Yu further teaches that the controller is arranged to receive the signal from the positioned antenna and to process the received signal so as to improve reception of the received signal, and wherein the processing of the received signal is dependent upon the position (figures 5A-B, column 6 line 32 to column 9 line 5).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of Terk, the automatic process to improve signal reception, as taught by Yu, so that the reception can be optimized without user intervention.

Regarding **claim 48**, this claim merely reflect the method claims to the apparatus claim of claims 38 and is therefore rejected for the same reasons.

3. **Claims 39-41, 49-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330), Yu ("Terk"; U.S. Patent Number 5,300,935) and in further view of Ma et al. ("Ma"; U.S. Patent Number 4,801,940).

Regarding **claims 39-40**, the combination of Terk and Yu discloses the invention but does not disclose that the controller stores a location of a known offending source and where the controller processes the received signal by reducing reception of a signal from the known offending source based upon the stored location of the known offending source and wherein the controller blocks reception of the signal from the known offending source only if the known offending source is effectively in the reception path between the antenna and the signal source.

In an analogous art, Ma teaches a satellite seeking system for antennas. Ma further teaches the apparatus and method wherein the controller stores the present location (figure 7, block 451) and noise figure (figure 7, block 452) to seek optimal signal reception of the selected channel (column 7 line 60 to column 8 line 3 and column 8 lines 38-60), thereby suggesting that a known offending source location is stored and reception from which is to be subsequently reduced and reception blocked by the controller base upon movement to an optimal reception location.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of Terk and Yu, the reducing of the signal from the known offending source, as taught by Ma, so that a good reception is achieved by eliminating most of the offending signal sources.

Regarding **claim 41**, the combination of Terk, Yu and Ma discloses the invention but does not disclose that the controller includes an FM trap to notch out a signal from the known offending source. However, the user of an FM trap is well known and widely used in television tuners and the Examiner takes Official notice of the use of an FM trap

Art Unit: 2685

for trapping out FM signals which may otherwise interfere with television signal reception.

Regarding **claims 49-51**, these claims merely reflect the method claims to the apparatus claim of claims 39-41 (respectively) and are therefore rejected for the same reasons.

4. **Claims 42, 45, 52, 55** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330), Yu ("Terk"; U.S. Patent Number 5,300,935) and in further view of Holmes ("Holmes"; U.S. Patent Number 4,359,760).

Regarding **claim 42 and 45**, the combination of Terk and Yu discloses the invention but does not disclose a variable gain amplifier electrically coupled between the antenna and a receiver tuned to the channel selected by the user, wherein the controller controls the gain of the variable gain amplifier according to the location of the signal source nor the controller is arranged to cancel ghosts depending upon the position of the antenna. In an analogous art, Holmes teaches a television ghost cancellation system. Holmes further teaches variable gain amplifier electrically coupled between the antenna and a receiver tuned to the channel selected by the user (figure 2, column 3, specifically lines 22-37) for canceling ghost image (column 6 lines 41-48)

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of Terk and Yu, the variable gain amplifier, as taught by Holmes, so that ghost image can be eliminated (see column 6 lines 41-48).

Regarding **claims 52,55**, these claims merely reflect the method claims to the apparatus claim of claims 42,45 (respectively) and are therefore rejected for the same reasons.

5. **Claims 43, 47, 53, 57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330), Yu ("Terk"; U.S. Patent Number 5,300,935) and in further view of Babitch ("Babitch"; U.S. Patent Number 5,347,286).

Regarding **claim 43**, the combination of Terk and Yu discloses the invention but does not disclose that location of the antenna is supplied by a global position sensor. In an analogous art, Babitch teaches an automatic antenna pointing system based on global positioning system (GPS). Babitch further discloses that the location of the antenna is supplied by a global position sensor (figure 7, GPS sensors 208, 210, column 18 lines 8-65).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of Terk and Yu, the GPS sensors, as taught by Simpson, so that the location of the antenna can be accurately defined.

Regarding **claim 47**, since Babitch teaches that the television signal is broadcast through an orbiting communication satellite (columns 1, 3), it is obvious that the location of the signal source and the location of the antenna are global locations.

Regarding **claims 53, 57**, these claims merely reflect the method claims to the apparatus claim of claims 43, 47 (respectively) and are therefore rejected for the same reasons.

6. **Claim 44, 54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330), Yu ("Terk"; U.S. Patent Number 5,300,935) and in further view of McNabb et al. ("McNabb"; U.S. Patent Number 6,016,120).

Regarding **claim 44**, the combination of Terk and Yu discloses the invention but does not disclose that the controller is arranged to drive the motor in response to a compass reading derived from a compass. In an analogous art, McNabb teaches a method and apparatus for automatically aiming an antenna to a distant location. McNabb further teaches the use of a compass for the antenna's orientation (figures 3a-3b, column 2 lines 34-65, column 5 lines 20-42).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of Terk and Yu, the compass, as taught by McNabb, so that a reference azimuth for the local antenna can be determined.

Regarding **claim 54**, this claim merely reflects the method claim to the apparatus claim of claim 44 and is therefore rejected for the same reasons.



Art Unit: 2685

7. **Claims 46, 56** are rejected under 35 U.S.C. 103(a) as being unpatentable over Terk ("Terk"; U.S. Patent Number 6,075,330), Yu ("Terk"; U.S. Patent Number 5,300,935) and in further view of Juroff et al. ("Juroff"; U.S. Patent Number 3,691,444).

Regarding **claim 46**, the combination of Terk and Yu discloses the invention but does not disclose that the antenna comprises first and second antennas, and wherein the controller is arranged to switch between the first and second antennas depending upon the channel selected by the user. In an analogous art, Juroff teaches a remote controlled television tuner motor control circuit. With reference to figure 1, Juroff further teaches the antenna comprises first and second antennas (figure 1, antenna 10 and 17), and wherein the controller is arranged to switch between the first and second antennas (figure 1, switches 88,103 depending on the channels selected VHF or UHF) depending upon the channel selected by the user (columns 3-4).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, within the system of Terk and Yu, the different antennas, as taught by Juroff, so that different channels can be selected such as UHF channels and VHF channels.

Regarding **claim 56**, this claim merely reflects the method claim to the apparatus claim of claim 46 and is therefore rejected for the same reasons.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

**Any response to this final action should be mailed to:**

**Box AF**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

Art Unit: 2685

(703) 872-9314, (for formal communications intended for entry, for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonny Trinh whose telephone number is (703) 305-1961. The examiner can normally be reached on Monday-Thursday from 7:00 a.m. to 4:30 p.m. The examiner can also be reached on alternate Fridays.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-306-0377.

**Sonny Trinh** *S.T.*

5/12/03



**NGUYEN T. VO**  
**PRIMARY EXAMINER**